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Claims

1. A method of creating a cavity, particularly a bone cavity, in correct position, at a preparation site by means of a hand instrument, comprising the following steps:
  - computing position-dependent surface features of a three-dimensional data set relating to the surface of the preparation site relative to a desired position of an implant to be inserted into said cavity, the area in which the cavity is to be created being present in the form of a three-dimensional set of volume data;
  - detecting at least one section of the preparation site which exhibits a visible real surface feature by means of a camera, located on the hand instrument at a specific distance from a machining tool, and a display providing a video image;
  - superimposing a computed surface feature for the target position of said hand instrument such that altering the position and angle of said hand instrument can cause a change in the position of said superimposed surface feature relatively to the visible real surface feature, and can, in particular, bring these two features to coincidence.
2. A method as defined in claim 1, characterized in that during the machining operation always those surface features which are computed for the current position of said hand instrument are superimposed over said video image, the current position of said hand instrument corresponding to a position of the implant within said cavity.

3. A method as defined in claim 2, characterized in that a surface feature for an end position of the hand instrument in the cavity to be created is displayed.
- 5 4. A method as defined in claim 1, characterized in that a horizon line is used as a surface feature.
5. A hand instrument for creating or excavating cavities, particularly bone cavities, comprising a machining tool (4), characterized in that said hand instrument  
10 (3) is provided with a camera (6), the distance of which from the tip (7) of said machining tool (4) is known.
6. A hand instrument as defined in claim 5, characterized in that said camera (6) has a depth of focus of from 5  
15 to 30 mm and scans a panorama view.
7. A hand instrument as defined in claim 5 or claim 6, characterized in that said camera (6) is integrated in that end (5) of said instrument (3) which is near said machining tool (4).
- 20 8. A hand instrument as defined in any one of claims 5 to 7, characterized in that illuminating means are provided for the purpose of illuminating that part of the surface which is relevant for registering and displaying said horizon line.
- 25 9. A hand instrument as defined in any one of claims 5 to 8, characterized in that it is linked to a display (12) for the image created with said camera and that data provided by an evaluating unit (13) are additionally shown in said display (12) as a surface feature.

REPLACED BY  
ART 34 AMDT

2001.0071 WO/US  
Sirona Dental Systems GmbH

12.04.2005

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10. A hand instrument as defined in claim 9, characterized in that the data provided by said evaluating unit (13) are shown in the form of a horizon line (H).